



THIONYL CHLORIDE

UN 1836

Shipping Name: Thionyl chloride

Other Names: Sulfynyl chloride
Sulfur chloride oxide
Sulfurous oxychloride



- WARNING!**
- **POISON! BREATHING THE VAPORS, SWALLOWING THE MATERIAL OR SKIN CONTACT CAN KILL YOU! SKIN AND EYE CONTACT CAN CAUSE SEVERE BURNS AND BLINDNESS!**
 - Firefighting gear (including SCBA) does not provide adequate protection. If exposure occurs, remove and isolate gear immediately and thoroughly decontaminate personnel
 - **DO NOT USE WATER! REACTS VIOLENTLY WITH WATER TO FORM TOXIC HYDROCHLORIC ACID!**

Hazards:

- Vapors are heavier than air and will collect and stay in low areas
- Container may BLEVE when exposed to fire
- Decomposition products upon heating include toxic hydrogen chloride and sulfur oxides

Awareness and Operational Level Training

Response:

- **DO NOT ATTEMPT RESCUE!**
- Stay upwind and uphill
- Determine the extent of the problem
- **BACK OFF!** - Isolate a wide area around the release or fire, deny entry and call for expert help
- For container exposed to fire evacuate the area in all directions because of the risk of BLEVE
- Evacuate or shelter in place the immediate area and downwind for a large release
- Notify local health and fire officials and pollution control agencies
- If material or contaminated run off enters waterways, notify downstream users of potentially contaminated water

Description:

- Colorless to yellow or red fuming liquid
- Suffocating, pungent odor
- Reacts violently with water to form hydrochloric acid
- Nonflammable
- Vapors are heavier than air and will collect and stay in low areas
- Produces large amounts of vapor

Operational Level Training Response:

RELEASE, NO FIRE:

- Stop the release if it can be done safely from a distance
- Prevent material and run off from entering sewers and waterways if it can be done safely well ahead of the release
- Use large amounts of water well away from the material to disperse vapors - contain run off
- Ventilate confined area if it can be done without placing personnel at risk

FIRE:

- Material does not burn; fight surrounding fire with an agent other than water or foam; do not allow water to come in contact with the material; if water must be used, use it in flooding quantities
- If material is not leaking, cool exposed containers with large quantities of water from unattended equipment or remove intact containers if it can be done safely
- If cooling streams are ineffective (unvented container distorts, bulges or shows any other signs of expanding), withdraw immediately to a secure location

First Aid:

- **DO NOT ATTEMPT RESCUE!**
- Provide Basic Life Support/CPR as needed
- Decontaminate the victim as follows:
 - ♦ Inhalation - remove the victim to fresh air and give oxygen if available
 - ♦ Skin - remove and isolate contaminated clothing (including shoes) and wash skin with soap and large volumes of water for 15 minutes
 - ♦ Eye - rinse eyes with large volumes of water or saline for 15 minutes
 - ♦ Swallowed - do not make the victim vomit
- Seek medical attention
- Toxic effects may be delayed
- For skin burns decontaminate with water and apply a clean dry dressing

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